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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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GIBBONS P.C. ONE GATEWAY CENTER NEWARK, NJ 07102			EXAMINER LAI, MICHAEL C	
			ART UNIT 2457	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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IPDocket@gibbonslaw.com

Office Action Summary	Application No. 10/723,992	Applicant(s) YANG ET AL.	
	Examiner MICHAEL C. LAI	Art Unit 2457	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/5/2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is responsive to communication filed on 4/22/2009 and 8/5/2009. Claims 2-48 have been examined.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/22/2009 has been entered.

Response to Amendment

3. The examiner has acknowledged the amended claims 2, 3, 7-8, 23, 25-29, and 32-33. Claim objection to claim 2 has been overcome and withdrawn accordingly. Claims 2-48 are pending.

Response to Arguments

4. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

5. Claim 2 is objected to because of the following informalities: "serial user interface" in lines 8 and 19 should be "serial interface". Appropriate correction is required.

Claim Rejections - 35 USC § 103

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2-4, 8-15, 17, 20, 22-23, 25-29, 33-39, 41, 45-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comstock et al. (US 2004/0083266 A1, hereinafter Comstock), and in view of Shirley (US 2002/0072892 A1, hereinafter Shirley).

Regarding claim 2, Comstock discloses a remote management system for managing serial devices having a serial interface and servers having keyboard, video, and mouse ("KVM") interfaces [FIG. 1-2] comprising:

a computer workstation including a keyboard, cursor control device and video display [para. 0023];

at least one remote server including KVM interface [para. 0034];

at least one remote serial device including a serial user interface [para. 0030];

a remote management unit coupled to said workstation and containing at least a KVM interface for connecting to said at least one remote server and a serial interface for directly connecting to said at least one remote serial device [FIG. 1, MCU 20];

communication means for providing bi-directional communication between said remote management unit and said workstation [FIG. 1, gateway 30 and PSTN 60; para. 0020, 0021].

Comstock discloses the claimed invention except for wherein said remote management unit enables switching said communication to and from said computer workstation between said KVM interface and said serial user interface. Shirley discloses by using a KVM switch, a user may switch between computers [see Fig. 2 and para. 0024]. Shirley further discloses incorporating a converter into a KVM switch directly. The converter acts as a terminal emulator and is connected to a communications port. By doing so, the communications port provides a serial interface. As a result, the KVM switch enables switching between the KVM interface and the serial interface [see Fig. 9 and para. 0024, 0034]. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate Shirley's teaching into Comstock's system for the purpose of eliminating extra mice, keyboards, and monitors by using a KVM switch which has capability of switching between the KVM interface and the serial interface, thereby providing cost and space saving in environments including server-farms and web-hosting facilities where space constraints are crucial.

Regarding claim 3, Comstock further discloses wherein said workstation controls a power source of at least one of said at least one remote device or one of said at least one remote serial device through said remote management unit [para. 0020, 0021].

Regarding claim 4, Comstock further discloses wherein access to said remote management unit by said workstation is controlled by unique user passwords or authentication information [para. 0027].

Regarding claim 8, Comstock further discloses wherein said remote management unit includes at least one header circuit for selective communication between at least one KVM port of said remote management unit and at least one video port of said at least one remote server [para. 0020, 0021].

Regarding claim 9, Comstock further discloses wherein said header circuit includes a video switch, and at least one receiver transmitter circuit, wherein said receiver transmitter circuit converts parallel and serial signals [para. 0030-0032, 0034-0035].

Regarding claim 10, Comstock further discloses wherein said remote management unit includes at least one frame grabber circuit for digitizing video signals [para. 0030, 0035].

Regarding claim 11, Comstock further discloses wherein said framer grabber circuit converts analog video signals to digital video signals [para. 0030-0032, 0035-0036].

Regarding claim 12, Comstock further discloses wherein said remote management unit includes a frame grabber circuit for correcting an image produced by said video signals [para. 0065-0067].

Regarding claim 13, Comstock further discloses wherein said remote management unit includes at least one local KVM port [para. 0020, 0021].

Regarding claim 14, Comstock further discloses wherein said remote management unit includes at least one video processor circuit for compressing video signals [para. 0038, 0065].

Regarding claim 15, Comstock further discloses wherein said video processor circuit includes at least one video receiving circuit for receiving video signals from at least one CPU [para. 0030-0032, 0035-0036].

Regarding claim 17, Comstock further discloses wherein said video processor circuit includes at least one frame buffer circuit for storing video frames indicative of said video signals [para. 0065, 0066].

Regarding claim 20, Comstock further discloses wherein said video processor circuit includes at least one memory circuit coupled to said microprocessor for storing data [para. 0065, 0066].

Regarding claim 22, Comstock further discloses wherein said remote management unit includes at least one modem module for demodulating signals received by a modem [para. 0038].

Regarding claim 23, Comstock further discloses wherein said communication means is selected from the group consisting of a LAN, a WAN, a wireless

connection, a modem, a direct modem connection, and the Internet [para. 0020, 0021].

Regarding claim 25, Comstock discloses an apparatus [FIG. 1, MCU 20] for coupling a workstation to one or more remote servers and one or more remote serial devices, said apparatus comprising:

- a communication circuit for transmitting signals to and receiving signals from said workstation via a communication medium [FIG. 1, gateway 30 and PSTN 60; para. 0020, 0021];

- a serial communication circuit for transmitting serial data to and receiving serial data signals from one or more of said remote serial devices [FIG. 1, MCU 20 and Network 80; para. 0020, 0021];

- a keyboard, video, mouse (KVM) circuit for transmitting and receiving KVM signals from one or more of said remote servers [para. 0034]; and

- a central processing circuit [para. 0022].

Comstock discloses the central processing circuit but fails to disclose specifically that the central processing circuit is for controlling transmission of said signals between at least one said communication circuit, said serial communication circuit and said KVM circuit. Shirley discloses by using a KVM switch, a user may switch between computers [see Fig. 2 and para. 0024]. Shirley further discloses incorporating a converter into a KVM switch directly. The converter acts as a terminal emulator and is connected to a communications

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port. By doing so, the communications port provides a serial interface. As a result, the KVM switch enables switching between the KVM interface and the serial interface [see Fig. 9 and para. 0024, 0034]. It would have been obvious to a person with ordinary skill in the art at the time the invention was made to incorporate Shirley's teaching into Comstock's apparatus for the purpose of eliminating extra mice, keyboards, and monitors by using a KVM switch which has capability of controlling transmission of signals between at least one communication circuit, a serial communication circuit and a KVM circuit, thereby providing cost and space saving in environments including server-farms and web-hosting facilities where space constraints are crucial.

Regarding claim 26, Comstock further discloses wherein said one or more remote servers and said one or more remote serial devices are powered by power sources [para. 0020, 0022].

Regarding claim 27, Comstock further discloses wherein said apparatus is connected to said power sources for said one or more remote server and one or more remote serial device [para. 0020, 0022].

Regarding claim 28, Comstock further discloses wherein said workstation controls said one or more remote server and one or more remote serial device power sources through said apparatus [para. 0020, 0021].

Regarding claim 29, Comstock further discloses wherein access to said apparatus by said workstation is controlled by unique user passwords or authentication information [para. 0027].

Regarding claim 33, Comstock further discloses wherein said apparatus includes at least one header circuit for selective communication between at least one KVM port and at least one video port of said remote servers [para. 0020, 0021].

Regarding claim 34, Comstock further discloses wherein said header circuit includes a video switch, and at least one receiver transmitter circuit, wherein said receiver transmitter circuit converts parallel and serial signals [para. 0030-0032, 0034-0035].

Regarding claim 35, Comstock further discloses wherein said apparatus includes at least one frame grabber circuit for digitizing and correcting images produced by video signals [para. 0030, 0035].

Regarding claim 36, Comstock further discloses wherein said frame grabber circuit converts analog video signals to digital video signals [para. 0030-0032, 0035-0036].

Regarding claim 37, Comstock further discloses wherein said apparatus includes at least one local KVM port [para. 0020, 0021].

Regarding claim 38, Comstock further discloses wherein said apparatus includes at least one video processor circuit for compressing video signals [para. 0038, 0065].

Regarding claim 39, Comstock further discloses wherein said video processor circuit includes at least one circuit to receive video signals from said central processing circuit [para. 0030-0032, 0035-0036].

Regarding claim 41, Comstock further discloses wherein said video processor circuit includes at least one frame buffer circuit for storing video frames indicative of said video signals [para. 0065, 0066].

Regarding claim 45, Comstock further discloses wherein said apparatus includes at least one modem module for demodulating signals received by modem [para. 0038].

Regarding claim 46, Comstock further discloses wherein said communication medium is at least one selected from the group consisting of a LAN, a WAN, a wireless connection, a modem, a direct modem connection, and the Internet [para. 0020, 0021].

Regarding claim 47, Comstock further discloses wherein said signals transmitted and received by said workstation are at least one control signal selected from the group consisting of keyboard, video, mouse, serial or power [para. 0020, 0022].

8. Claims 5 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comstock and Shirley as applied to claim 2, and further in view of Watkins (US 2002/0198978 A1, hereinafter Watkins).

Regarding claims 5 and 30, Comstock and Shirley fail to specifically disclose redundant power supply. However, Watkins teaches a back-up redundant power

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supply [para. 0033]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate Watkins' teaching into Comstock's and Shirley's system for the purpose of preventing total power loss by using a redundant power supply, thereby providing a reliable power supply system.

9. Claims 6-7 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comstock and Shirley as applied to claim 2, and in view of DeAnna et al. (US 2003/0084056 A1, hereinafter DeAnna).

Regarding claims 6 and 7, Comstock and Shirley fail to disclose the option menu circuit including identification of said at least one remote device. However, DeAnna teaches in a remote management system uses a convenient menu to change a server device [para. 0047]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate DeAnna' teaching into Comstock's and Shirley's system for the purpose of providing a menu driven environment by using an option menu including identification of remote device, thereby providing a more user friendly system.

Regarding claims 31 and 32, Comstock and Shirley fail to disclose the option menu circuit including identification of said at least one remote device. However, DeAnna teaches in a remote management system uses a convenient menu to change a server device [para. 0047]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate DeAnna' teaching into Comstock's and Shirley's system for the purpose of providing a

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menu driven environment by using an option menu including identification of remote device, thereby providing a more user friendly system.

10. Claims 16, 18-19, 21, 40, 42-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comstock and Shirley as applied to claim 2, and further in view of Coleman (US 2004/0042547 A1, hereinafter Coleman).

Regarding claims 16 and 40, Comstock and Shirley teach substantially all the limitation in claim 14, but fails to disclose wherein said video processor circuit includes at least one pixel pusher circuit for storing red, green and blue video signal components of said video signals. However, Coleman teaches using a pixel pusher 221 to store A/D converter 201 outputs pixels representing the red component, green component and blue component of the digitized signal [FIG. 2 and para. 0118]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate Coleman' teaching into Comstock's and Shirley's system for the purpose of storing red, green and blue video signal components of video signals by using a pixel pusher, thereby providing a system of effectively digitizing and compressing the video output of a computer such that it may be monitored and controlled from a remote location.

Regarding claims 18 and 42, Comstock and Shirley teach substantially all the limitation in claim 14, but fails to disclose using Joint Bi-level Image experts Group (JBIG) compression for video processor circuit compresses video signals. However, Coleman teaches using the JBIG lossless compression technique for compressing video data [para. 0075]. It would have been obvious to a person of

ordinary skill in the art at the time the invention was made to incorporate Coleman' teaching into Comstock's and Shirley's system for the purpose of saving network bandwidth by using a lossless compression algorithm such as JBIG, thereby providing a system of effectively digitizing and compressing the video output of a computer such that it may be monitored and controlled from a remote location.

Regarding claims 19 and 43, Comstock and Shirley teach substantially all the limitation in claim 15, but fails to disclose wherein said video processor circuit includes at least one microprocessor for controlling at least one of a frame buffer circuit, pixel pusher circuit and JBIG compression. However, Coleman teaches using a microprocessor for controlling the frame buffer, pixel pusher and JBIG [FIG. 2 and para. 0118]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate Coleman' teaching into Comstock's and Shirley's system for the purpose of controlling video digitization/compression by using a microprocessor, thereby providing a system of effectively digitizing and compressing the video output of a computer such that it may be monitored and controlled from a remote location.

Regarding claims 21, Comstock and Shirley teach substantially all the limitation in claim 14, but fail to disclose wherein said video processor circuit includes at least one switch for outputting video signals. However, Coleman teaches compression and digitization of computer video through a video switch [para. 0021]. It would have been obvious to a person of ordinary skill in the art at

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the time the invention was made to incorporate Coleman' teaching into Comstock's and Shirley's system for the purpose of allowing the transfer of video data over extended distances at increased speed of transfer by using a video switch, thereby providing a better remote monitoring/management system [para. 0021].

Regarding claims 44, Comstock and Shirley teach substantially all the limitation in claim 38, but fail to disclose wherein said video processor circuit includes at least one switch for outputting signals to an Ethernet port or a modem port. However, Coleman teaches compression and digitization of computer video through a video switch [para. 0021]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate Coleman's teaching into Comstock's and Shirley's apparatus for the purpose of allowing the transfer of video data over extended distances at increased speed of transfer by using a video switch, thereby providing a better remote monitoring/management system [para. 0021].

11. Claims 24 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comstock and Shirley as applied to claim 2, and in further view of Kim et al. (US 2003/0055922 A1, hereinafter Kim).

Regarding claim 24, Comstock and Shirley teach substantially all the limitation in claim 2, but fails to disclose wherein said remote management unit includes reset circuitry controllable by said workstation for resetting said remote management unit. However, Kim teaches a reset circuitry provided for resetting

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previously generated identifier values stored in the special function register [para. 0050]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate Kim's teaching into Comstock's and Shirley's system for the purpose of controlling the remote management unit via a reset circuit, thereby providing a better remote controlling/management system.

Regarding claim 48, Comstock and Shirley teach substantially all the limitation in claim 25, but fail to disclose wherein said apparatus includes a reset circuit for resetting said apparatus. However, Kim teaches a reset circuitry provided for resetting previously generated identifier values stored in the special function register [para. 0050]. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate Kim's teaching into Comstock's and Shirley's apparatus for the purpose of controlling the remote management unit via a reset circuit, thereby providing a better remote controlling/management system.

Conclusion

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL C. LAI whose telephone number is (571)270-3236. The examiner can normally be reached on M-F 8:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Primary Examiner, Art Unit 2457